Amendment to the Claims

1.-21.(Canceled)

22. (New) An annular seal for sealing first and second opposed flanges to maintain an internal pressure less than an external pressure, the seal having nested inner and outer members and having a longitudinal radial section which is characterized by:

the outer member being generally c-shaped and open radially outward; and

the inner member nested within the outer member and being generally c-shaped and open radially outward and having a wall thickness effective to maintain the outer member in engagement with the first and second flanges in the absence of a spring nested within the inner member and wherein the inner metallic annular member longitudinal radial cross-section has a central arcuate portion and a pair of distal straight portions extending radially outward from opposite ends of the arcuate portion.

23. (New) The seal of claim 22 wherein:

the inner member has a full plating of a copper-base material.

24. (New) The seal of claim 22 wherein:

the inner member is formed of a nickel-base superalloy; and

the outer member is formed of an aluminum-base material.

25. (New) The seal of claim 22 being effective to provide a leakage rate of no more than about $4x10^{-12}$ cm^3/s-mm.

26. (New) A seal for sealing a pair of opposed flanges, the seal comprising an outer metallic annular member having a generally c-shaped longitudinal radial cross-section and an inner metallic annular member having a generally c-shaped longitudinal radial cross-section, wherein the outer metallic annular member has a pair of oppositely-directed, longitudinally outward-projecting, ridges for deformably engaging the pair of opposed metal flanges and the inner metallic annular member has longitudinal strength and elasticity effective to maintain the

ridges in engagement with the flanges and lacking a helical energizing spring.

27. (New) The seal of claim 26 wherein the inner metallic annular member has a characteristic thickness of between about 2 and 4 times a characteristic thickness of the outer metallic annular member.

28. (New) The seal of claim 26 wherein the inner metallic annular member is formed of a nickel-based superalloy and the outer metallic annular member is formed of an aluminum-based material.

29. (New) The seal of claim 26 wherein the each of the ridges has a longitudinal extent beyond a thickness of the outer member away from the ridges.

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30. (New) A seal for sealing a pair of opposed flanges, the seal comprising an outer metallic annular member having a generally c-shaped longitudinal radial cross-section and an inner metallic annular member having a generally c-shaped longitudinal radial cross-section, wherein the outer metallic annular member has a pair of oppositely-directed, longitudinally outward-projecting, flat-lapped, ridges for deformably engaging the pair of opposed flanges.

31. (New) The seal of claim 30 wherein the outer metallic annular member is thicker along the ridges than anywhere else.

32. (New) The seal of claim 30 wherein the each of the ridges has a longitudinal extent beyond a thickness of the outer member everywhere away from the ridges.

33. (New) The seal of claim 30 wherein the inner metallic annular member has a characteristic thickness of between about 2 and 4 times a characteristic thickness of the outer metallic annular member.

34. (New) The seal of claim 30 wherein the inner metallic annular member is formed of a

nickel-based superalloy and the outer metallic annular member is formed of an aluminum-based material.

35. (New) A seal for sealing a pair of opposed flanges, the seal comprising an outer metallic annular member having a generally c-shaped longitudinal radial cross-section and an inner metallic annular member having a generally c-shaped longitudinal radial cross-section, wherein the outer metallic annular member has a pair of oppositely-directed, longitudinally outward-projecting, ridges for deformably engaging the pair of opposed flanges and wherein the each of the ridges has a longitudinal extent beyond a thickness of the outer member everywhere away from the ridges.

36. (New) The seal of claim 35 lacking a helical energizing spring.

37. (New) The seal of claim 35 wherein the inner metallic annular member has a characteristic thickness of between about 2 and 4 times a characteristic thickness of the outer metallic annular member.

38. (New) The seal of claim 35 wherein the inner metallic annular member is formed of a nickel-based superalloy and the outer metallic annular member is formed of an aluminum-based material.

39. (New) The seal of claim 35 wherein the inner metallic annular has a full plating.

40. (New) A method for manufacturing an annular seal for sealing first and second opposed flanges to maintain an internal pressure less than an external pressure, the seal having nested inner and outer members:

welding ends of a piece of a first metal together to form a first band;

die-forming the first band into a generally c-shaped, open radially outward, cross-section so as to form the inner member having a wall thickness effective to resist compression of the sea between the first and second flanges so as to maintain the outer member in sealed engagement

with the first and second flanges to maintain said internal pressure;

inserting a second band of a second metal within the first band;

forming the second band into a c-shaped cross-section around the inner member;

roll-forming first and second opposed, longitudinally outward projecting, annular ridges in the second band to provide the outer member; and

flat lapping the ridges to provide first and second faces for sealing with the first and second ridges.

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41. (New) The method of claim 32 wherein:
the inner member is plated prior to insertion of the second band.

42. (New) The method of claim 32 further comprising:
prior to insertion of the second band, applying a full plating to the inner member.